Slide 1-Earth’s Layers

1. Crust
   1. Composition
      1. Mostly oxygen combined with other materials- silicon, aluminum, iron, and calcium
      2. Soil and rock that covers Earth’s surface
      3. Covered by ocean water
   2. Thickness
      1. Ocean water- 6-11 kilometers thick
      2. Dry land-35-40 kilometers thick
2. Mantle
   1. Composition
      1. Mostly oxygen combined with silicon, magnesium, and iron
      2. Outer part is solid like the crust
      3. Inner part is so hot that rock can flow very slowly over time
   2. Thickness
      1. 2,900 kilometers
3. Outer Core
   1. Composition
      1. Scientists think it’s made of iron mixed with iron mixed with smaller amounts of other materials
      2. Much denser than the mantle
      3. So hot that it’s liquid
   2. Thickness
      1. 2,221 kilometers
4. Inner Core
   1. Composition
      1. Mostly iron
      2. Solid

Slide 2-Plates

1. Define
   1. Plate Tectonics
      1. Theory that Earth’s lithosphere is broken into about 20 moving plates
      2. Continents and ocean floor make up the surfaces of moving plates
2. Explain
   1. Continental Drift
      1. The theory that continents drifted apart in the past and continue to do so
      2. As Pangaea broke apart, its pieces moved to different parts of Earth to form today’s continents
   2. Plate Boundaries
      1. Areas where two plates meet
      2. Move slowly in different directions
      3. May move apart, collide, or slide past each other

Slide3-Spreading Boundaries

1. Explain
   1. Plates move away from each other
   2. Gaps form between the plates
   3. Convection currents cause magma to rise from the mantle through gaps
   4. Huge valleys can form
   5. Responsible for seafloor spreading

Slide 4-Fracture Boundaries

1. Explain
   1. Plates slide past each other
   2. Break in the crust is called a fault
   3. Movements of plates past each other can cause strong earthquakes

Slide 5-Colliding Boundaries

1. Explain
   1. Two plates push against each other
   2. One plate might slide beneath the other
   3. When plates carry continents into each other, towering mountains form
   4. Also, deep ocean trenches, earthquakes, and volcanoes can result

Slide 6- Earthquakes

1. Define
   1. Focus
      1. Underground point where the earthquake occurs
      2. Energy waves spread
   2. Epicenter
      1. Point on earth’s surface directly over the focus
      2. Energy waves spread
      3. Largest possibility for damage
   3. Magnitude
      1. Strength of an earthquake
      2. Shown on Richter scale
2. Describe
   1. Large earthquake in the past
      1. Haiti
         1. Tuesday January 12, 2010
         2. 7.0 magnitude
         3. Epicenter near the town of [Léogâne](http://en.wikipedia.org/wiki/L%C3%A9og%C3%A2ne)
            1. Approximately 25 kilometer from capital
         4. By January 24, at least 52 aftershocks of 4.5 magnitude or greater had been recorded
         5. 316,000 people died
         6. 300,000 had been injured
         7. 1,000,000 made homeless.
         8. Estimated that 250,000 [residences](http://en.wikipedia.org/wiki/Residential_area) and 30,000 [commercial buildings](http://en.wikipedia.org/wiki/Commercial_building) had collapsed or were severely damaged
         9. Two weeks later, small fishing town was hit by a large tsunami
            1. Petit Paradis

Slide 7-Volcanoes

1. Why
   1. Volcano can happen
      1. When one plate sinks beneath another at a plate boundary, the sinking crust melts into magma
      2. Pressure can build up from gasses trapped in magma
      3. If the crust of the overlaying plate can no longer withstand the pressure, magma explodes through it as a volcano

Slide 8-Rocks

1. Composition
   1. Rocks
      1. Made up of one or more minerals
2. Define
   1. Mineral
      1. Natural non-living solid with a definite chemical structure
3. Composition
   1. Mineral
      1. Crystals arranged in a particular repeating pattern
4. Define
   1. Crystals
      1. Regular, repeating pattern, in which particles are arranged
      2. Some are large
      3. Some are small

Slide 9-Minerals

1. 3 Properties
   1. Color
      1. Can be seen in its streak
         1. Mark when rubbed against unglazed ceramic tile
   2. Luster
      1. Appearance of material in reflected light
      2. May be metallic or non- metallic, greasy, glassy or waxy
   3. Shape
      1. Shape of crystals
         1. Can be square or other shapes

Slide 10-Sedimentary Rock

1. Formation
   1. Made from pieces of rocks and minerals
   2. Forms in layers with oldest rock on bottom

Slide 11-Igneous Rock

1. Formation
   1. Forms when magma cools and hardens
   2. Cools quickly-fine-grained rock forms
   3. Cools slowly-coarse-grained rock forms

Slide 12-Metamorphic Rock

1. Formation
   1. Forms when heat, pressure, or chemical reactions change one type of rock to another type of rock
   2. Made from sedimentary rock or igneous rock